

ABSTRACT OF THE DISCLOSURE

A method of manufacture of cadmium mercury telluride (CMT) is disclosed. The method involves growing one or more buffer layers on a substrate by molecular beam epitaxy (MBE). Subsequently at least one layer of cadmium mercury telluride, $\text{Hg}_{1-x}\text{Cd}_x\text{Te}$ where x is between 0 and 1 inclusive, is grown by metal organic vapour phase epitaxy (MOVPE). The use of MBE to grow buffer layers allows a range of substrates to be used for CMT growth. The MBE buffer layers provide the correct orientation for later MOVPE growth of CMT and also prevent chemical contamination of the CMT and attack of the substrate during MOVPE. The method also allows for device processing of the CMT layers to be performed with further MOVPE growth of crystalline CMT layers and/or passivation layers.

The invention also relates to new devices formed by the method.